

REMARKS

Claims 1 and 3-8 are pending herein.

I. The telephone discussion with the Examiner.

Applicants respectfully thank the Examiner for discussing this case by telephone on August 4, 2011. As discussed during the telephone conference, the claims have been amended to more clearly claim the structure of the system along the supplying lines of the gas.

II. The anticipation rejections of claims 1, 3-5, and 8 based on Fujioka (US 5,180,684), as noted on page 2 of the Office Action.

The USPTO respectfully rejects claims 1-5 and 8 under 35 U.S.C. § 102(b). Claim 1 is an independent claim.

A. Fujioka does not disclose that one of the supplying lines comprises a middle line, wherein a first switching valve is provided downstream of the gas vaporizer at an inlet port of the middle line, and a second switching valve provided downstream of the first switching valve at an outlet port of the middle line, as claimed in claim 1.

Claim 1 claims in relevant part:

"wherein the precursory gas supplying line comprises a precursory gas middle line having a predetermined volume that is arranged on a part or all of the precursor-supplying line and into which the precursory gas can be filled at a time when the precursory gas is not supplied, and/or wherein the reactive gas supplying line comprises a reactive gas middle line having a certain volume that is arranged on a part or all of the reactive-gas-supplying line and into which the reactive gas can be filled at a time when the reactive gas is not supplied,

wherein a first switching valve is provided on the precursory gas supplying line and/or reactive gas supplying line at a position downstream of the precursory gas vaporizer and/or the reactive gas vaporizer at an inlet port of the precursory gas middle line and/or the reactive gas middle line;

wherein a second switching valve is provided on the precursory gas supplying line and/or reactive gas supplying line at a position downstream of the first switching valve at an outlet port of the precursory gas middle line and/or the reactive gas middle line." (**emphasis added**)

No new matter is added by the amendments. Support for the amendments is found in present Figure 1. Regarding these limitations, it is respectfully not seen where Fujioka discloses the claimed structure quoted above.

For example, the USPTO respectfully argues on page 2 of the Office Action that Fujioka shows a precursory gas middle line at the “piping between structures 13 and 15” and a reactive gas middle line at the “piping between structures 13 and 14.” However, regarding the amendments, it is respectfully asserted that Fujioka does not disclose a supplying line that comprises a first switching valve downstream of a gas vaporizer, and a second switching valve downstream of the first switching valve, as claimed in claim 1. Instead, because pump 16 of Fujioka maintains a suction to the right direction in Figure 1 of Fujioka, there is no gas supply path that would include two of valves 13, 14, 15 as the specifically claimed first switching valve and second switching valve of claim 1. In other words, Fujioka does not disclose that one of the supplying lines comprises a middle line, wherein a first switching valve is provided downstream of the gas vaporizer at an inlet port of the middle line, and a second switching valve provided downstream of the first switching valve at an outlet port of the middle line, as claimed in claim 1.

In contrast, present Figure 1 illustrates at least one possible embodiment of the claimed structure quoted above. For example, present Figure 1 shows a gas vaporizer 62, 72. Present Figure 1 further shows a first switching valve 1b1, 2b1 at an inlet port of middle line 12, 22 at a position downstream of vaporizer 62, 72, and a second switching valve 1b2, 2b2 downstream of first switching valve 1b1, 2b1. Thus, present Figure 1 shows that one of the supplying lines comprises a middle line, wherein a first switching valve is provided downstream of the gas vaporizer at an inlet port of the middle line, and a second switching valve provided downstream of the first switching valve at an outlet port of the middle line, as claimed in claim 1.

The distinction noted above is important and non-trivial because it results in significant advantages over conventional devices. For example, as explained on page 2 of the Office Action, the structure of claim 1 improves throughput during a process of forming the thin film and improves quality of the thin film.

Thus, it is respectfully asserted that Fujioka does not disclose all of the limitations of independent claim 1. Therefore, it is respectfully asserted that Fujioka does not anticipate independent claim 1.

B. The dependent claims.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and therefore it is further respectfully asserted that dependent claims 2-5 and 8 are also allowable.

III. The obviousness rejection of claim 6 based on Fujioka in view of Ahn (US 2002/0122885), as noted on page 6 of the office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Ahn does not overcome the deficiencies in Fujioka as noted above in Section II regarding independent claim 1. Thus, it is respectfully asserted that dependent claim 6 is also allowable.

IV. The obviousness rejection of claim 7 based on Fujioka in view of Udagawa (US 6,645,302), as noted on page 7 of the Office Action.

As noted above, it is respectfully asserted that independent claim 1 is allowable, and it is further respectfully asserted that Udagawa does not overcome the deficiencies in Fujioka as noted above in Section II regarding independent claim 1. Thus, it is respectfully asserted that dependent claim 7 is also allowable.

V. Conclusion.

Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

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